Information Disclosure Statement:

The Applicant thanks the Examiner for considering and making of record the information disclosure statement.

Specification:

The disclosure was objected to for an informality. The specification has consequently been amended in accordance with the Examiner's suggestion. The Applicant thanks the Examiner for his suggestion. Withdrawal of the objection is earnestly solicited.

Claim Rejections - 35 U.S.C. § 103:

Claims 1, 2, 12 and 13 stand rejected as being unpatentable over Yoshimi et al., U.S. Patent No. 5,603,093, in view of the admitted prior art of Fig. 11 of the application. The rejection is traversed. Reconsideration is requested.

The present invention relates to an interference wave detecting device which can be disposed at a base station. According to the present invention, interference waves on the downlink channel from the base station to the mobile station can be detected by the base station only.

In the reference of Yoshimi, on the other hand, a mobile station measures the field intensity and bit error rate of a downlink radio wave from a base station at each measurement timing and reports the measured results to the base station. In the reference of Yoshimi, interference waves on the downlink channel are measured by a mobile station. The base station is

adapted to receive the measurement results from the mobile station and judge the state of interference from the received measurement results. Thus, the reference Yoshimi does not teach an interference wave detecting means which can be disposed at a base station and which can detect the interference waves on the downlink channel.

Also, as described in the present specification (page 4, line 29 to page 5, line 20), the admitted prior art (Fig. 11) has no means for detecting the level of interference waves on the downlink channel from the base station to the mobile station.

Claim 1 recites,

"An interference wave detecting device comprising:

transmitting means for converting data to be transmitted from a base station into a radio signal of a predetermined transmission frequency, and for transmitting said radio signal to a mobile station;

receiving means for receiving either of a radio signal lying within a certain reception band of frequencies including a predetermined reception frequency from said mobile station and an interference wave signal lying within a certain transmission band of frequencies including said predetermined transmission frequency; and

controlling means for causing said transmitting means to stop transmitting said radio signal of said predetermined

transmission frequency in order to detect said interference wave signal, and for enabling said receiving means to receive said interference wave signal only within a period of time during which said transmitting means stops transmitting said radio signal of said predetermined transmission frequency to said mobile station."

Neither Yoshimi nor Fig. 11 teach, disclose or suggest stopping transmission of a radio signal for the purpose of detecting an interference signal. Nor do they teach, disclose or suggest enabling a receiving means to receive an interference wave signal only within the period of time during which the transmitting means stops transmitting the radio signal. Yoshimi, in fact, teaches away from stopping a transmission from a base station to monitor interference at column 1, lines 60 through 65, continuing at column 2, lines 1 through 25. Yoshimi is describing the disadvantages of stopping a transmission at column 1, lines 60 through 65, continuing at column 2, lines 1 through 25, not suggesting it. Yoshimi, for example, describes disadvantages such as the time required to perform interference measurements (column 2, line 15), and the resulting impairment of radio service (column 2, line 25). It is therefore submitted that one of ordinary skill in the art who read Yoshimi would actually be deterred from, rather than motivated toward, considering stopping a base station transmission to measure interference.

Fig. 11, on the other hand, shows an interference wave measuring apparatus for measuring interference waves on the upward channel from a mobile station to a base station. One of ordinary skill in the art would not find a remedy for the disadvantages described by Yoshimi in Fig. 11, since Fig. 11 does not require stopping a base station transmission to measure interference on the uplink channel from the mobile station. Fig. 11 thus does not address the disadvantages of the conventional system as described by Yoshimi. Fig. 11 also does not, therefore, suggest any modification of the conventional system as described by Yoshimi for measuring interference waves on the downlink channel from the base station to the mobile station. It is therefore respectfully submitted that one of ordinary skill in the art who read about the disadvantages of the conventional system as described by Yoshimi and set out to find a solution to them would not view Fig. 11 as providing such a solution. Claim 1 is thus submitted to be allowable. Withdrawal of the rejection to claim 1 is earnestly solicited.

Claim 2 depends from claim 1 and adds further distinguishing elements. Claim 2 is thus also submitted to be allowable. Withdrawal of the rejection of claim 2 is earnestly solicited.

Claim 12 recites:

"A method of detecting interference waves, comprising the steps of:

converting data to be transmitted from a base station into a radio signal of a predetermined transmission frequency, and transmitting said radio signal to a mobile station;

receiving a radio signal lying within a certain reception band of frequencies including a predetermined reception frequency from said mobile station; and

in order to detect an interference wave signal lying within a certain transmission band of frequencies including said predetermined transmission frequency, stopping the transmission of said radio signal of the predetermined transmission frequency to said mobile station and receiving said interference wave signal."

Neither Yoshimi nor Fig. 11 teach, disclose or suggest stopping transmission of a radio signal for the purpose of detecting an interference signal, as discussed above with respect to claim 1. Claim 12 is thus submitted to be allowable. Withdrawal of the rejection of claim 12 is earnestly solicited.

Claim 13 depends from claim 12 and adds further distinguishing elements. Claim 13 is thus also submitted to be allowable. Withdrawal of the rejection of claim 13 is earnestly solicited.

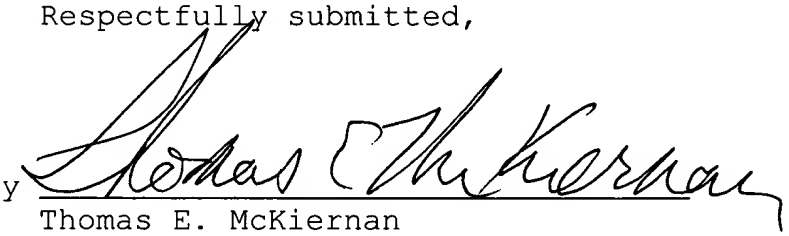
Allowable Subject Matter:

The Applicant thanks the Examiner for indicating that claims 3 through 9 and 14 through 20 would be allowable if they were re-written in independent form. The Applicants respectfully request

that re-writing claims 3 through 9 and 14 through 20 in independent form be held in abeyance pending reconsideration of claims 1, 2, 12, and 13.

Accordingly, in view of the reasons given above, it is submitted that all claims 1 through 20 are allowable over the prior art. Since the objections to the specification have been addressed it is submitted that all of claims 1 through 20 are now allowable. Allowance of all claims 1 through 20 and of this entire application are therefore respectfully requested.

Respectfully submitted,

By 

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